

CONSULTATION PAPER
INTRODUCTION OF A PRICE
CONTROL MECHANISM DURING
THE CLOSING AUCTION SESSION
IN THE SECURITIES MARKET

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Hong Kong Exchanges and Clearing Limited
香港交易及結算所有限公司

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EXECUTIVE SUMMARY

This consultation paper seeks views and comments from all interested parties regarding the possible introduction of a price control mechanism for order input during the Closing Auction Session (CAS) in the Hong Kong securities market as well as the possibility of suspending the CAS.

The background of this consultation and highlights of the current auction trading mechanism are presented in Parts A and B of this paper. The introduction of a price control mechanism is described in Part C. Reference should also be made to Appendix I for examples of price control measures currently in place in various overseas exchanges.

Respondents should reply to this consultation paper by completing and returning the questionnaire which is available at http://www.hkex.com.hk/consul/paper/cp200811q_e.doc before 31 December 2008. Hong Kong Exchanges and Clearing Limited will then issue a consultation conclusions paper summarizing the main points made by the respondents and conclude a way forward based on market responses.

PART A: BACKGROUND

1. Auction trading is a common mechanism adopted in nearly all major securities markets for commencing and concluding market trading. It is well recognized as an efficient mechanism for price formation and facilitating trading at market open and close.
2. Since 25 March 2002, an auction trading mechanism has been in place at Hong Kong Exchanges and Clearing Limited (HKEx) for securities trading during its Pre-opening Session (POS).
3. Starting from 26 May 2008, the CAS was introduced for facilitating trading at market close and determining securities closing prices using the same auction algorithm applied in the POS. The CAS was introduced following broad market and public consultation¹ and designed based on the market consensus and the longstanding POS.
4. As mentioned in the CAS consultation conclusions paper², a separate exercise would be conducted with market participants to consider whether any enhancements to the auction trading mechanism might be appropriate after experience was gained with the CAS. HKEx has been closely monitoring the trading activities during the CAS, and has identified a number of enhancement opportunities in the auction trading mechanism.
5. This consultation paper particularly focuses on one of the possible enhancement areas, namely the introduction of a price control mechanism to restrict excessive price movements during the CAS. In addition, suspending the CAS is also included as an option for consideration by market participants. All interested parties are invited to respond to this consultation paper. Other comments and suggestions related to the CAS are also welcome.

¹ The consultation paper issued in March 2007 is available at http://www.hkex.com.hk/consul/paper/c_auction_e.pdf.

² The consultation conclusions paper issued in July 2007 is available at <http://www.hkex.com.hk/consul/conclusion/cac.pdf>.

PART B: CURRENT AUCTION TRADING MECHANISM DURING THE CLOSING AUCTION SESSION

6. The Hong Kong securities market commences a typical trading day with the POS, followed by the Continuous Trading Session, and ending with the CAS. During the POS and the CAS, buy and sell orders are matched by an auction trading mechanism whereby orders for each security are consolidated for execution at a single price that maximizes the tradable quantity of the security.
7. During the CAS, there are two periods, namely the Order Input Period and the Pre-order Matching Period, during which auction orders may be entered for all securities. The following table briefly summarizes the features of the CAS³:

For the CAS		
Auction phases	Order Input Period	Pre-order Matching Period
Time span	16:00 - 16:08 (8 minutes); or 12:30 - 12:38 (8 minutes) for half day trading	16:08 - 16:10 (2 minutes); or 12:38 - 12:40 (2 minutes) for half day trading
Security coverage	All securities	All securities
Order input	Allowed	Allowed
Types of orders allowed	At-auction; At-auction limit	At-auction
Order validation	9 times restriction ⁴ (for at-auction limit orders)	Not applicable
Order amendment and cancellation by Exchange Participants	Allowed	Not allowed
Short selling order input	Not allowed	Not allowed
Participation by Structured Product Liquidity Providers and Securities Market Makers	Not allowed	Not allowed
Handling of outstanding orders at the end of the CAS	All outstanding orders which remain partly or wholly unmatched will be cancelled and deleted from the Exchange's trading system	

8. Only at-auction orders, i.e. market orders with no specified price, and at-auction limit orders, i.e. limit orders with specified prices, are allowed during the CAS. At-auction orders take execution priority over at-auction limit orders.
9. An Indicative Equilibrium Price (IEP)⁵ and an Indicative Equilibrium Volume (IEV) for each security are continuously updated and disseminated when auction orders are input, amended or cancelled during the Order Input Period, or when at-auction orders are input in the Pre-order Matching Period. The IEP is the price at which the maximum number of shares of a security would be traded if matching occurs at that time. The IEV is the number of shares that would be traded at the IEP. After the end of the Pre-order Matching Period, orders are matched at the final IEP, if available, which is also the official closing price of a security.

³ For features related to the POS, please refer to <http://www.hkex.com.hk/infra/tradmech/tradmech.htm>.

⁴ The 9 times restriction stipulates that an order shall not be made at a price that deviates 9 times or more from the prevailing nominal price.

⁵ For illustrative examples of the IEP calculation, please refer to <http://www.hkex.com.hk/consul/conclusion/iep.pdf>.

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10. In the absence of the final IEP of a security, the median of the five snapshot nominal prices⁶ taken at 15-second intervals in the last minute of the Continuous Trading Session will be used as the closing price⁷ of the security.

⁶ The nominal price in the Continuous Trading Session is determined by comparing the current bid price, current ask price and last traded price / previous closing price, as the case may be. For details, please refer to Appendix II and Chapter 1 of the Rules of the Exchange.

⁷ For detailed explanation of the current closing price calculation methodology, please refer to <http://www.hkex.com.hk/tradinfo/closepricecal/closepricecal.pdf>.

PART C: INTRODUCTION OF A PRICE CONTROL MECHANISM

11. Currently, orders carried over to or input during the CAS are subject to the 9 times restriction, which rejects orders with prices that deviate 9 times or more from the nominal price (being defined as the prevailing IEP or the nominal price at 4 pm⁸ in the absence of an IEP).

International Practices

12. In preparing this consultation paper, HKEx has reviewed the auction trading practices of 10 international markets and notes that:

	Asia Pacific	America	Europe
With price control in the CAS	Tokyo Stock Exchange (TSE) Korea Exchange (KRX) Taiwan Stock Exchange (TSEC) Shenzhen Stock Exchange (SZSE)		
No price control in the CAS	Australian Securities Exchange (ASX)	New York Stock Exchange (NYSE) National Association of Securities Dealers Automated Quotations (NASDAQ)	London Stock Exchange (LSE) Euronext (ENXT) Deutsche Börse (DBAG)

13. For those markets that have price control measures during the CAS, HKEx observes that the CAS of these markets usually follows the same price control mechanism applied in the Continuous Trading Session, and the range of prices for price control is typically derived from reference prices such as the last traded price or the previous closing price of the security. No price control for order entry is applied during the CAS in ASX, DBAG, ENXT, LSE, NASDAQ and NYSE. The detailed international practices are included in Appendix I.

Introduction of a Price Control Mechanism

14. A price control mechanism may be introduced to automatically detect and reject entry of orders that are priced outside an acceptable range during the CAS. It may be implemented in three alternative approaches as described in paragraphs 16 to 25 below.
15. Notwithstanding which approach is adopted, HKEx does not intend to apply the price control mechanism to (i) at-auction orders; and (ii) orders input in POS.

Approach 1: Impose a price control limit based on a pre-set percentage from nominal prices at 4 pm

16. Under Approach 1, any at-auction limit order input during the CAS cannot have a price above or below a certain percentage, say 5% or 10%, of the nominal price at 4 pm. Orders input with prices outside this range will be rejected by the Exchange's trading system. In effect,

⁸ In this consultation paper, the nominal price at 4 pm is equivalent to the nominal price at 12:30 pm for half day trading.

this limits the range of the final IEP (i.e. the closing price) of any security within this bound when compared with the nominal price at 4 pm. This price control mechanism will not be applied to all outstanding orders carried over to the CAS from the Continuous Trading Session.

17. The following table depicts the possible price movement in terms of absolute value and number of trading spreads (spreads) for all securities at different price ranges if the price control limit is set at 5% and 10% respectively:

Price range (\$)	1 spread (\$)	Price control limit set at 5%		Price control limit set at 10%	
		In terms of value (\$)	In terms of spreads (spreads)	In terms of value (\$)	In terms of spreads (spreads)
For all securities (except debt securities)					
0.01 - 0.25	0.001	0 - 0.012	0 - 12	0.001 - 0.025	1 - 25
0.25 - 0.5	0.005	0.012 - 0.025	2 - 5	0.025 - 0.05	5 - 10
0.5 - 10	0.01	0.025 - 0.5	2 - 50	0.05 - 1	5 - 100
10 - 20	0.02	0.5 - 1	25 - 50	1 - 2	50 - 100
20 - 100	0.05	1 - 5	20 - 100	2 - 10	40 - 200
100 - 200	0.1	5 - 10	50 - 100	10 - 20	100 - 200
200 - 500	0.2	10 - 25	50 - 125	20 - 50	100 - 250
500 - 1000	0.5	25 - 50	50 - 100	50 - 100	100 - 200
1000 - 2000	1	50 - 100	50 - 100	100 - 200	100 - 200
2000 - 5000	2	100 - 250	50 - 125	200 - 500	100 - 250
5000 - 9995	5	250 - 495	50 - 99	500 - 995	100 - 199
For debt securities					
0.50 - 9999.95	0.05	0 - 499.95	0 - 9999	0.05 - 999.95	1 - 19999

* For debt securities, a uniform spread of \$0.05 is applied to all debt securities with prices ranging from \$0.50 to \$9,999.95.

18. The price control mechanism, if implemented, will be applied to all securities. Particular attention should be paid to securities (other than debt securities) with prices from \$0.01 to \$0.019 and debt securities with prices from \$0.50 to \$0.95, of which one spread movement will result in over 5% change in prices. Hence, if the price control limit is set at 5%, no price movement will be allowed for these securities during the CAS.
19. This approach would avoid the price of an at-auction limit order from deviating significantly from the nominal price at 4 pm in terms of percentage and hence restrict excessive price changes in the CAS.

Approach 2: Impose a price control limit based on a pre-set number of spreads from nominal prices at 4 pm

20. Under Approach 2, any at-auction limit order input during the CAS cannot have a price above or below a certain number of spreads, say 10 or 24 spreads, of the nominal price at 4 pm. Orders input with prices outside this range will be rejected by the Exchange's trading system. In effect, this limits the range of the final IEP of any security to be within this bound when compared with the nominal price at 4 pm. This price control mechanism will not be applied to all outstanding orders carried over to the CAS from the Continuous Trading Session.

21. The following table depicts the possible price movement in terms of absolute value and percentages for all securities at different price ranges if the price control limit is set at 10 spreads and 24 spreads respectively:

Price range (\$)	1 spread (\$)	Price control limit set at 10 spreads		Price control limit set at 24 spreads	
		In terms of value (\$)	In terms of percentages (%)	In terms of value (\$)	In terms of percentages (%)
For all securities (except debt securities)					
0.01 - 0.25	0.001	0.01	100 - 4	0.024	240 - 9.6
0.25 - 0.5	0.005	0.05	20 - 10	0.12	48 - 24
0.5 - 10	0.01	0.1	20 - 1	0.24	48 - 2.4
10 - 20	0.02	0.2	2 - 1	0.48	4.8 - 2.4
20 - 100	0.05	0.5	2.5 - 0.5	1.2	6 - 1.2
100 - 200	0.1	1	1 - 0.5	2.4	2.4 - 1.2
200 - 500	0.2	2	1 - 0.4	4.8	2.4 - 0.96
500 - 1000	0.5	5	1 - 0.5	12	2.4 - 1.2
1000 - 2000	1	10	1 - 0.5	24	2.4 - 1.2
2000 - 5000	2	20	1 - 0.4	48	2.4 - 0.96
5000 - 9995	5	50	1 - 0.5	120	2.4 - 1.2
For debt securities					
0.5 - 9999.95	0.05	0.5	100.0 - 0.005	1.2	240.0 - 0.012

22. This approach could avoid the price of an at-auction limit order from deviating significantly from the nominal price at 4 pm in terms of spreads and hence restrict excessive price changes in the CAS.

Approach 3: Impose a price control limit based on the day high and day low prices⁹ at 4 pm plus and minus a pre-set number of spreads

23. Under Approach 3, any at-auction limit order input during the CAS cannot have a price above the day high price plus a certain number of spreads or below the day low price minus a certain number of spreads of a security at 4 pm. Orders input with prices outside this range will be rejected by the Exchange's trading system. In effect, this limits the range of order prices input during the CAS to be within the day high and day low prices plus and minus a certain number of spreads.
24. This approach differs from the other two approaches in several areas: (i) the control focus is different as the acceptable price range is not referenced to the nominal price at 4 pm; (ii) under certain scenarios, the final IEP may still be outside the range of the day high and day low prices plus and minus a certain number of spreads¹⁰; (iii) in the absence of trades of a security before the CAS starts, its day high and day low prices will not be available. In this case, subject to market feedback, either no order input will be allowed or no price control limit will be imposed for this security during the CAS.

⁹ Day high (low) price refers to the highest (lowest) price of a non-direct trade concluded by automatic order matching (including auction matching) at a particular point in time.

¹⁰ This is caused by outstanding orders carried forward from the Continuous Trading Session to the CAS which are priced outside the pre-set range. One way to prevent this occurrence is to cancel all those outstanding orders but this may have significant impact on the operations of Exchange Participants.

25. The following table summarizes the three approaches:

	Approach 1: Based on a pre-set percentage	Approach 2: Based on a pre-set number of spreads	Approach 3: Based on day high/low prices at 4 pm +/- a pre- set number of spreads
Price control limit	Nominal price at 4 pm plus and minus a pre-set %	Nominal price at 4 pm plus and minus a pre-set number of spreads	The day high/low prices plus and minus a pre-set number of spreads
Allowable range of prices disseminated to the market (based on the current information dissemination format adopted by the Exchange)	No	No	Yes (if 0 spread is allowed, i.e. simply using the day high/low prices) No (if a certain number of spreads is allowed on top of the day high/low prices)
Spread change of closing prices vs nominal prices at 4 pm	Varied, fewer spreads allowed for low-priced securities and more spreads allowed for high-priced securities	Certain, within the pre-set spread range	Uncertain as nominal price at 4 pm is unrelated to the day high/low prices at 4 pm
% change of closing prices vs nominal prices at 4 pm	Certain, within the pre-set percentage range	Varied, higher % change allowed for low-priced securities and lower % change allowed for high-priced securities	Uncertain as nominal price at 4 pm is unrelated to the day high/low prices at 4 pm

Note: In the absence of the final IEP, the determination of closing prices will be based on median prices taken in the last minute of the Continuous Trading Session as stipulated in paragraph 10, and thus not affected by the proposed price control measures.

Considerations for Suspending the CAS

26. The introduction of the CAS was a result of broad market and public consultation. Its design was based on market responses then and international practices, and also mirrored the existing POS mechanism to the extent possible to simplify operations and implementation efforts of HKEx and market participants.
27. In essence, the CAS provides an official trading facility that permits (i) the consolidation of order flow for simultaneous execution at market close; and (ii) the determination of closing prices based on aggregate market demand and supply.
28. However, in light of the diverse market responses to the current closing auction mechanism in Hong Kong, one option is for HKEx to suspend the CAS and only consider re-introducing it when there is a market consensus on the enhancement measures. It should be noted that if the CAS were to be suspended, the trading model of the Hong Kong securities market would revert to the pre-CAS operating mode¹¹.

¹¹ For details of the pre-CAS operating mode, please refer to the consultation paper issued in March 2007 at http://www.hkex.com.hk/consul/paper/c_auction_e.pdf.

Introduction of a Price Control Mechanism during the CAS

Questions for response

- (1) Do you support Approach 1, Approach 2, Approach 3 or suspending the CAS as a whole? Please state.

- (2) If Approach 1 is adopted,
 - (i) Do you prefer the price limit to be set at 5%, 10% or other percentages?
 - (ii) How much lead time would your firm require for its implementation?

- (3) If Approach 2 is adopted,
 - (i) Do you prefer the price limit to be set at 10 spreads, 24 spreads or other spreads?
 - (ii) How much lead time would your firm require for its implementation?

- (4) If Approach 3 is adopted,
 - (i) Do you prefer the outstanding orders priced outside the pre-set range to be cancelled instead of carrying forward to the CAS?
 - (ii) For securities without the day high and day low prices at 4 pm, do you prefer disallowing order input during the CAS for these securities or not imposing a price control limit at all?
 - (iii) Do you prefer the price control limit to be set at 0 spreads (i.e. simply using the day high and day low prices as limit), 10 spreads or other spreads above the day high and below the day low prices?
 - (iv) How much lead time would your firm require for its implementation?

- (5) If suspension of the CAS is adopted, how much lead time would your firm require for its implementation?

- (6) Do you have other proposed measures to reduce price volatility during the CAS or other comments or suggestions regarding the CAS? Please state.

PART D: HOW TO RESPOND TO THIS CONSULTATION PAPER

29. HKEx invites market participants and other interested parties to submit written comments on matters discussed in this paper no later than 31 December 2008.
30. Persons wishing to submit comments should, where applicable, provide details of any organization which they represent. Responses should be made by completing and returning the questionnaire on this subject (a softcopy of which in word format is available at http://www.hkex.com.hk/consul/paper/cp200811q_e.doc), by one of the following methods:
- By mail or
hand delivery to Corporate Communications Department
 Hong Kong Exchanges and Clearing Limited
 12th Floor, One International Finance Centre
 1 Harbour View Street
 Central
 Hong Kong
- Re: **Consultation Paper on
Introduction of a Price Control Mechanism
during the Closing Auction Session
in the Securities Market**
- By fax to (852) 2524-0149
- By e-mail to auction_consultation@hkex.com.hk
31. HKEx's submission enquiry number is (852) 2840-3844.
32. The names of persons who submit comments on this consultation paper together with the whole or part of their submissions may be disclosed to members of the public. Respondents who do not wish their names to be published should indicate so clearly on their submissions. HKEx's policy on handling personal data is set out in Appendix III.

APPENDIX I: PRICE CONTROL MEASURES IN VARIOUS OVERSEAS EXCHANGES

Material contained in this Appendix is for background and reference purposes only.

The information was compiled on a best efforts basis through desktop research and discussions with overseas exchanges and market participants. While every effort is made to ensure that all information is accurate, some of the information may be outdated or incomplete because of changes in market practices over time.

Readers are therefore advised to consult the relevant exchanges for more details or further updates if necessary.

Summary Findings

Name of Exchange	Any Price Control during the Continuous Trading Session?	Any Price Control during the CAS?
HKEx	The 9 times restriction and 24-spread rule are applicable.	Only the 9 times restriction is applicable.
TSE	There is a daily price limit which is determined on a sliding scale with respect to the previous day's closing price.	The same price limit in the Continuous Trading Session is applied in the CAS.
KRX	Daily price limits are applied during the Continuous Trading Session (except for new issues or re-issues). For stocks, Exchange Traded Funds, Depository Receipts and beneficiary certificates, a price limitation of $\pm 15\%$ of the base price (usually the previous closing price) is applied to the order price. Equity Linked Warrants (i.e. DW equivalents) are not subject to this base price limitation.	The same price limit in the Continuous Trading Session is applied in the CAS.
TSEC	A price limit of $\pm 7\%$ price difference from the previous closing price is applied.	The same price limit in the Continuous Trading Session is also applied in the CAS.
SZSE	A daily price limit of $\pm 10\%$ or $\pm 5\%$ depending on the equity group from the previous closing price is applied. The order price is validated against this limit when the order is input to the system.	The same price limit in the Continuous Trading Session is also applied in the CAS.
ASX	No	No
DBAG	No price limit is applied at order entry level. However, if the final determined price deviates too much from the last price, a volatility auction is called where the market is given the opportunity to modify, enter or delete orders.	The CAS follows the same principles applied in the Continuous Trading Session.
ENXT	No price limit is applied at order entry level. However, there might be a volatility interruption triggered if the execution prices of some securities reach certain price limits which are dependent on the equity type they belong to.	The CAS follows the same principles applied in the Continuous Trading Session.
LSE	No price limit is applied at order entry level. However, there is validation at execution level, and execution may be halted if certain price movement tolerances are breached.	The CAS follows the same principles applied in the Continuous Trading Session. In addition, there are extensions of trading if prices exceed certain percentage of automatic trade VWAP.
NASDAQ	No	No
NYSE	No	No

APPENDIX II: DETERMINATION OF NOMINAL PRICES

The following table summarizes how nominal prices are determined during the POS, the CAS and the Continuous Trading Session.

<u>Trading Session</u>	<u>Nominal Price</u>
POS	IEP and in the absence of IEP, previous closing price
CAS	IEP and in the absence of IEP, nominal price at 4 pm
Continuous Trading Session	Best bid price > last traded price ¹² , then best bid price Best ask price < last traded price ¹² , then best ask price Otherwise, last traded price ¹²

Below are some examples showing the determination of nominal prices during the Continuous Trading Session:

Example: Stock XYZ					
Case 1 (with bid only)		Case 2 (with ask only)		Case 3 (with both bid & ask)	
Last Traded ¹²	\$122.0	Last Traded ¹²	\$122.0	Last Traded ¹²	\$122.0
Best Bid	\$123.0	Best Bid	Nil	Best Bid	\$121.5
Best Ask	Nil	Best Ask	\$121.0	Best Ask	\$122.5
Nominal	\$123.0	Nominal	\$121.0	Nominal	\$122.0
Case 4 (without bid & ask)		Case 5 (without last traded price)			
Last Traded ¹²	\$122.0	Last Traded	Nil		
Best Bid	Nil	Best Bid	Nil		
Best Ask	Nil	Best Ask	Nil		
Nominal	\$122.0	<u>Scenario A</u>		<u>Scenario B</u>	
		Previous Close	\$120.0	Previous Close	N/A ¹³
		Nominal	\$120.0	Nominal	N/A ¹⁴

¹² Last traded price (also known as the last recorded price) refers to the last non-direct trade concluded by automatic order matching (including auction matching). In the absence of the last traded price, the previous closing price is used for comparison instead.

¹³ N/A = Not Available (e.g. in the case of newly listed stock, the previous closing price will be N/A)

¹⁴ In the absence of the last traded price, if the previous closing price = N/A, the nominal price is always = N/A, disregard whether the best bid/ask price is present or not.

APPENDIX III: PERSONAL INFORMATION COLLECTION AND PRIVACY POLICY STATEMENT

Provision of Personal Data

1. Your supply of Personal Data to HKEx is on a voluntary basis. “Personal Data” in these statements has the same meaning as “personal data” in the Personal Data (Privacy) Ordinance, Cap 486.

Personal Information Collection Statement

2. This Personal Information Collection Statement is made in accordance with the guidelines issued by the Privacy Commissioner for Personal Data. It sets out the purposes for which your Personal Data will be used after collection, what you are agreeing to in respect of HKEx’s use, transfer and retention of your Personal Data, and your rights to request access to and correction of your Personal Data.

Purpose of Collection

3. HKEx may use your Personal Data provided in connection with this discussion paper for purposes relating to this exercise and for one or more of the following purposes:
 - for performing or discharging HKEx’s functions and those of its subsidiaries under the relevant laws, rules and regulations;
 - for research and statistical purposes;
 - for any other lawful purposes.

Transfer of Personal Data

4. Your Personal Data may be disclosed or transferred by HKEx to its subsidiaries and/or regulator(s) for any of the above stated purposes.
5. Your Personal Data may also be disclosed or transferred to members of the public in Hong Kong and elsewhere as part of the public discussion of this paper, including but not limited to disclosing your name to the public together with the whole or part of your comments by posting them on the HKEx website, publishing them in documents or by other means. If you do not wish your name to be disclosed to members of the public, please state so when responding to this paper.

Access to or Correction of Data

6. You have the right to request access to and correction of your Personal Data in accordance with the provisions of the Personal Data (Privacy) Ordinance. HKEx has the right to charge a reasonable fee for processing any data access request. Any such request for access to and/or correction of your Personal Data should be addressed to the Personal Data Privacy Officer of HKEx in writing by either of the following means:

By mail to: Personal Data Privacy Officer
Hong Kong Exchanges and Clearing Limited
12th Floor, One International Finance Centre
1 Harbour View Street
Central
Hong Kong

By email to: pdpo@hkex.com.hk

Retention of Personal Data

7. Your Personal Data will be retained for such period as may be necessary for the carrying out of the above-stated purposes.

Privacy Policy Statement

8. HKEx is firmly committed to preserving your privacy in relation to Personal Data supplied to HKEx on a voluntary basis. Personal Data may include names, addresses, e-mail addresses, login names, etc, which may be used for the stated purposes when your Personal Data is collected. The Personal Data will not be used for any other purposes without your consent unless such use is permitted or required by law.
9. HKEx has security measures in place to protect against the loss, misuse and alteration of Personal Data supplied to HKEx. HKEx will strive to maintain Personal Data as accurately as reasonably possible and Personal Data will be retained for such period as may be necessary for the stated purposes and for the proper discharge of the functions of HKEx and those of its subsidiaries.

APPENDIX IV: GLOSSARY

ASX	Australian Securities Exchange
CAS	Closing Auction Session
DBAG	Deutsche Börse
ENXT	Euronext
HKEx	Hong Kong Exchanges and Clearing Limited
IEP	Indicative Equilibrium Price
IEV	Indicative Equilibrium Volume
KRX	Korea Exchange
LSE	London Stock Exchange
NASDAQ	National Association of Securities Dealers Automated Quotations
NYSE	New York Stock Exchange
POS	Pre-opening Session
SZSE	Shenzhen Stock Exchange
The Exchange	The Stock Exchange of Hong Kong
TSE	Tokyo Stock Exchange
TSEC	Taiwan Stock Exchange

